

What is claimed is:

[Claim 1] Apparatus for molding components of a vehicular headlamp, the apparatus comprising:

a mold, the mold comprising:

a first mold cavity for molding a first resin component of the vehicular headlamp, the first resin component having a shape selected from the group consisting of a substantially circular shape, a substantially U-shape, and a substantially L-shape; and

a second mold cavity for molding a second resin component of the vehicular headlamp, the second resin component being sufficiently smaller than said main component that said second mold cavity fits within said first mold cavity in said mold and enables molding of said first resin component and said second resin component without having those components interfere with each other, such that a size of the mold for molding both the first resin component and the second resin component is substantially the same size as a size of the mold for molding only the first resin component;

the apparatus further comprising an injection nozzle for injecting resin into said first and second mold cavities.

[Claim 2] The apparatus according to claim 1, wherein the mold further comprises a first resin passage for connecting the first and second mold cavities, and a resin supply passage receiving said resin from said injection nozzle, and supplying said resin to one of the first and second mold cavities.

[Claim 3] The apparatus according to claim 1, wherein the mold further comprises a further injection nozzle, and at least first and second resin supply passages receiving said resin from said injection nozzles and supplying said resin to the first and second mold cavities.

[Claim 4] The apparatus according to claim 1, further comprising a resin supply passage receiving resin from said injection nozzle and having a branch connected to said first and second mold cavities to inject resin into the first and second mold cavities.

[Claim 5] The apparatus according to claim 1, wherein said first resin component is an extension reflector for a headlamp, and the second resin component is another portion of the headlamp, but is smaller than an open portion of the extension reflector.

[Claim 6] A mold device for molding components of a vehicular headlamp, the mold device comprising:

a first mold cavity for molding a first resin component of the vehicular headlamp, the first resin component having a shape selected from the group consisting of a substantially circular shape, a substantially U-shape, and a substantially L-shape; and

a second mold cavity for molding a second resin component of the vehicular headlamp, the second resin component being sufficiently smaller than said first resin component that said second mold cavity fits within said first mold cavity in said mold and enables molding of said first resin component and said second resin component without having those components interfere with each other, such that a size of the mold for molding

both the first resin component and the second resin component is substantially the same size as a size of the mold for molding only the first resin component.

[Claim 7] The mold device according to claim 6, further comprising a first resin passage for connecting the first and second mold cavities, and a resin supply passage supplying resin to one of the first and second mold cavities.

[Claim 8] The mold device according to claim 6, further comprising at least first and second resin supply passages supplying resin respectively to the first and second mold cavities.

[Claim 9] The mold device according to claim 6, further comprising a resin supply passage having a branch connected to said first and second mold cavities for supplying resin into the first and second mold cavities.

[Claim 10] The mold device according to claim 1, wherein said first resin component is an extension reflector for a headlamp, and the second resin component is another portion of the headlamp, but is smaller than an open portion of the extension reflector.

[Claim 11] A method of injection molding components of a vehicular headlamp, the method comprising:

injecting resin into a first mold cavity for molding a first resin component of the vehicular headlamp, the first resin component having a shape selected from the group

consisting of a substantially circular shape, a substantially U-shape, and a substantially L-shape; and

injecting resin into a second mold cavity for molding a second resin component of the vehicular headlamp, the second resin component being sufficiently smaller than said first resin component that said second mold cavity fits within said first mold cavity in said mold and enables molding of said first resin component and said second resin component without having those components interfere with each other, such that a size of the mold for molding both the first resin component and the second resin component is substantially the same size as a size of the mold for molding only the first resin component.

[Claim 12] The method according to claim 11, wherein the first and second mold cavities are connected by a first resin passage; and

wherein the method further comprises injecting resin into said first mold cavity; and
wherein resin passes from said first mold cavity to said second mold cavity.

[Claim 13] The method according to claim 11, wherein the first and second mold cavities are connected by a first resin passage; and

wherein the method further comprises injecting resin into said second mold cavity;
and

wherein resin passes from said second mold cavity to said first mold cavity.

[Claim 14] The method according to claim 11, wherein the first and second mold cavities have respective resin supply passages;

the method further comprising injecting a first resin into said first mold cavity via said first resin supply passage, and injecting a second resin into said second mold cavity via said second resin supply passage.

[Claim 15] The method according to claim 14, wherein said first resin is the same as said second resin.

[Claim 16] The method according to claim 14, wherein said first resin is different from said second resin.

[Claim 17] The method according to claim 11, wherein said first and second mold cavities are connected by a resin supply passage having a branch substantially at a midpoint thereof; and

wherein said method further comprises injecting resin into said first and second mold cavities via said resin supply passage.

[Claim 18] The method according to claim 11, wherein said first resin component is an extension reflector for a headlamp, and the second resin component is another portion of the headlamp, but is smaller than an open portion of the extension reflector.